

EFFECTIVENESS OF INTERNET ADVERTISING

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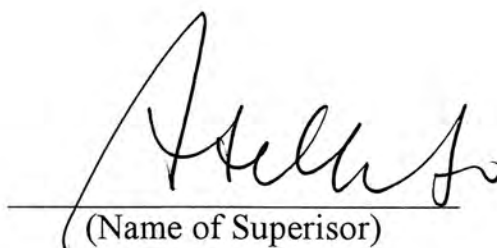
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ABSTRACT

This research report aims at studying the effectiveness of Internet Advertising which measured awareness, perception and click through rates. The study found that both awareness and click through rates are low. Using experimental web sites followed by questionnaires, authors evaluated ad awareness with respect to ad positions, popularity of brands, time spent and other demographics. The effectiveness and the existing charging method on ad banner was also challenged.

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CHAPTER I

INTRODUCTION

The world entered into the era of information since the entrance of the new millenium. The information highway, so called Internet, will play a very important role in this era. Internet is recognized as the fastest growing media in the history. The number of Web users has been estimated at 36 million in 1996 and is expected to grow to 170 million users by the year 2000¹. Taking Hong Kong as an example, the internet traffic volume per month increased from 551 million minutes in October 1998 to more than 1 billion minutes in September 1999². Apart from the internet usage, the worldwide electronic commerce transactions will grow from US\$12.4 billions in 1997 to more than US\$400 billions by 2002³. Most of them are from the internet sector.

Followed by the release of the first commercially available Web browser, Netscape 1.0, on November 1994, internet not only became a media for information but also a new channel for advertisement. The topic of internet advertising has drawn enough attention

1 Dreze, Zufryden. "Is Internet advertising ready for prime time?" Journal of advertising Research, (May/June 1998)

2 "Internet Service Providers." OFTA Web Site (1999), [<http://www.ofta.gov.hk/tele-lic/operator-licensees/opr-isp.html>]

3 "The right connection." HK Enterprise news letter (April 1999), [<http://www.tdc.org.hk/prodmag/enterpri/ent199904nf.ht>]

from marketers and researchers because of its fast growth rate, insufficient knowledge about the effect of this new advertising media, the demographics is dreams for them⁴.

Although the exact numbers of usage are difficult to point out, we do know usage is expected to continue grow rapidly. Academics and practitioners are discussing the importance of the Web as a marketing communication tool. However, little systematic research has been undertaken to measure the role and effect of internet advertising.

Together with the growth of internet, the internet advertisement has a good prospect, business spend more than \$1.9 billion to advertise on the Web on 1998 and it is expected to climb to \$6.7 billion by 2001⁵. For the demographics, net users are young, well educated, approximately equally weighted on genders and earn high incomes⁶. The situation is similar in Hong Kong. In 1999, 34 percent of internet users are between 15-24 years of age, and 25 percent in the 35-44 age group which is growing in number⁷. Such market segment is the target market of almost all products. Therefore, internet advertising would be a dream comes true for many advertisers as well as advertising agencies, due to the unique characteristics of the new established media.

4 Beach. "Why internet advertising." Bandweek (May 5, 1997)

5 Mottl. "The trouble with Online ads." InformationWeek (October 11, 1999)

6 Beach. "Why internet advertising." Bandweek (May 5, 1997)

7 Toth. "Surfing the Internet is not just for youths anymore." Adweek (October 1,

According to the Internet Advertising Bureau, Internet Advertisement is defined as any content on a Web site which intends to act as a commercial device to carry a message or attract a user⁸. Under this definition, internet advertising may include corporate web site, any form of product information site, online catalog, discussion group on specific product, banner, hyper links to product promotion and etc. However, the most common type of internet advertising is ad banner, which can present together with the web page content or in a pop-up window.

Objective

This research aimed at achieving the following objectives. One of the aim is to examine the effectiveness of the awareness of internet advertising, both for new brand which solely use internet as an advertising channel, and an existing brand which already adopt several others advertising means. This is done by measuring the awareness raised by different advertising tools from the consumer sides. Also, this research try to find out which internet advertising tools is most effective, in term of its size, locations, features and form of appearance, and determine what factors an internet advertising tools need to attract web browser attention.

1999)

8 "Internet advertising defined." Brandweek, May 5, 1997

CHAPTER II

SIGNIFICANCE OF STUDY

It has been debating on the method to measure the effectiveness of internet advertising. Advertisers and media argued that the ad was effective only if it was clicked for more information, so it should be charged according to the click-through. However, others believe that internet advertising can enhance awareness, purchase intentions and even retention (Gurley 1998)⁹, therefore, internet advertising should be charged based on the site visit or so called reaches. In our study, on-of effect other than click-through - the awareness - is investigated and how will it be affected by the design is also evaluated. By the result, the charging method can be recommended.

Although the Internet draws attentions from most aspect, lot of advertisers have not include Internet in their advertising plan. In a current survey in Asia, more then 60 percent of advertising agents reported that less than 10 percent of their clients use internet as a medium to reach consumers or build brands¹⁰. One of the reasons is the uncertainty of the effect. Recommendation can be given under the conclusion of this

9 "How the web will warp advertising." *Fortune* (November 9, 1998): 119-120

10 "Long way to go before the Internet lives up to the be-all, do-all hype." *Media* (May 14, 1999)

research. Should the ad design purely for click-through? Could it be used on brand recognition?

CHAPTER III

LITERATURE REVIEW

In this few years, various studies have been conducted concerning the internet advertising in the way similar to the other media. Internet advertising was found to be effective in customer behavior by enhancing the awareness, exposure, retention, perception and attitude. For exposure and awareness, investigations proved that the web banner exposure generated increases in consumer loyalty, and advertising awareness would also increased in the advertised group over unadvertised group¹¹. Internet users' perceptions of internet advertising are generally positive and the structure of attitudes toward internet advertising is the same as that for general advertising attitude¹². While on the advertiser's point of view, internet should be incorporated into their marketing communications mix and its growth will be tremendous although they were uncertain with the effectiveness of internet advertising¹³.

11 Briggs, Hollis. "Advertising on the Web: Is there response before click-through?" Journal of advertising Research (March/April 1997)

12 Schlosser, Shavitt, Kanfer. "Survey of Internet Users' attitudes toward internet advertising." Journal of Interactive Marketing 13, Number 3 (Summer 1999)

13 Bush, Bush, Harris. "Advertiser Perceptions of the Internet as a Marketing Communications Tool." Journal of Advertising Research (March/April 1998)

Apart from the advertisement on the web, research also found that advertisers with a web address (URL) included in their ads on other media are perceived as more engaged into high tech image, more informative and geared toward young market¹⁴. The web addresses not only helping the company to provide information to customer, and also enhance their corporate image to the public. A large numbers of well-known companies have been adopting this promotion strategy in mid 90s and promote their corporate web sites on their print ads and commercials

What does internet advertising brings us?

Benefits of using internet advertising took a while to count. Internet advertising provides a lower cost advertising channel compared with traditional different advertising media. Cost saving is possible because no matter what size of audience you attract and no need to restrict the timing. Also it acts as a just-in-time marketing as advertisers can change their ad on daily basis. And one of the most unique features of internet advertising is its interactivity make ad almost as targeted as a personal call.

14 Maddox, Metha. "The Role and Effect of Web addresses in Advertising." Journal of Advertising Research (April 1997)

What makes the differences?

The layout of the ad banner is also important to advertisers. A study concluded that bigger ads were more effective than simpler banner ads, with consumers getting the main message one-third of the time they saw full screen ads but only 16% of the time they saw banners¹⁵. Animated GIF in the banner ads is also commonly used, this technique increase the click through rates by 25 percent by comparing with static ad banners¹⁶. In mid 1997, pop-up ads began. It can increase click through dramatically from 0.7 percent to 3 percent¹⁷. However, this is not much study on the effect to awareness of those layouts.

What's the trend?

Internet advertising started from a hyperlink stated corporate brand name or product information to ad banner. Moving backward few years time there are only hyperlinks could be found on web, linking web surfer to the company web. What web surfer could only been told was the company name, or limited amount of product information. And after a transition to the most popular aids nowadays, ad banner becomes a powerful

15 Machlis. "New ads: Rich concepts, not rich media." Computerworld (August 31, 1998)

16 McGalliard. "Animate your web site gif graphics." Editor & Publisher (May 1998): 42-45

17 Kuchinskas. "Addicted to Advertising." Adweek (October 19, 1998)

weapon for advertising on internet. Ad banners on the top and the bottom of a page becomes a convention and simply a must for advertisers. The media looks like dominated by a tide of ad banner flooding into web surfing for internet user. But on the other hand, the best advertising in the banner space is the one allows people to get something back immediately, and obviously that does not drag them off to another site which is being so disturbing. The ad banner should be in the way that every time web surfer click on a banner, instead of taking over your browser window, they should automatically launch a separate browser window. People argue that this should not be a media department function but more a distribution function. In mid 1997 began obscuring the screen until the often-frustrated web site visitor clicked the window closed. Research had been found that a pop-up could increase click-through dramatically. Opening a pop up window for advertising, rather than launching an ad banner on a web site, definitely is advertisers' fortune to not only promote their products and services, but also offer a more direct distribution and communication channel.

Is there something missed?

However, those researches conducted were limited general study on the internet advertising while there were not much in-depth studies on how different internet

advertising tools used vary among different products. For example, as mentioned above, banner was found to be effective, but no distinct themes were found for banner advertising¹⁸.

Traditional measurement of internet advertising such as return of investment (ROI), the number of visitors to a web site visit, and time in which visitors spend on the site are limited for primary usage only. The more recent approach is to measure the click-through rate, the percentage of all impressions of particular online content in which the viewer then clicks on the content to go on to another web page containing additional information.

Some experts believe that the web has not lived up to its marketing potential because of technical constraints such as limited bandwidth, a lack of standards to adequately measure the effectiveness of an internet advertisement, and marketers' inability to use the web to its fullest potential¹⁹. Survey shows that 65% of companies in the ads industry are investing in research to measure online ad effectiveness²⁰. However, budget invested in research remains low so that the amount of research is not

18 Arbittier, Philport. "Advertising: Brand Communications Styles in Established Media and the Internet." Journal of Advertising Research (March/ April 1997)

19 Machlis. "Key advertisers ally to improve marketing." Computerworld (August 24, 1998)

substantial enough to find out any results and conclusions.

Currently, internet advertising are charged by Ad view or click though rate. In addition to those numbers, web site will provide statistics of impressions, reaches and frequencies of exposures to evaluate the actual number of times the advertisement being viewed. However, it is difficult to measure those figures for a target audience. "What type of people visit a Web site?" is generally unanswered by current web-based measures²¹.

How do we measure?

When advertisers are spending huge amount of money on ad banners in recent years, the question of how effective is the banner have been raised. The answer is crucial, as it have to be proofed with solid evidence to show that is effective as people believe. If all advertisers have is a digital footprint that is left by people, or may be their address if they actually buy something, they do not have a complete picture of customers. Basically there are two issues, one is the measurement of traffic on sites, and the other is measuring how much individual customers are worth over times, based on their

20 Mottl. "The trouble with Online ads." InformationWeek (October 11, 1999)

21 Dreze, Zufryden. "Is Internet advertising ready for prime time?" Journal of

online activity. However, online advertising agencies do not think measurement is really the main issue. The measurement aspects that we are trying to get are:

1. Exposure, which is a traditional sort of advertising kind of measurement. How many people look at my stuff? Internet advertising is a new established advertising channel, although the number of internet users is increasing year by year, but the question of the real number of people pay their attention to the online advertising is still doubtful. So, the measurement of exposure of an ad banners and the awareness contributed have to be carried out.
2. Effectiveness. Is that entity accomplishing what it was meant to do? This could be a transaction, or pulling people from the media side to the advertiser's side. The effectiveness of an online advertising tool is still in debating stage, and the buying intention by the online advertising is hard to proof. But as long as the awareness of a brand name was raised by an online advertising tool, then there is at least a guarantee on the effectiveness.
3. In what way did this help the business? It is the most difficult to measure, because many times there is no way to track down within a company the origination point of a lead or of a transaction. It is also difficult to judge how the sales volume, profit, distribution channels and corporate image improved by that online advertising tool.

Many studies show that fully half the people who are exposed to a brand or a product or service online go on to complete that transaction offline, which is very difficult to measure. It is kind of limitations on the measurement.

CHAPTER IV

METHODOLOGY

Objective

The objective of this research is to measure the effectiveness of conventional internet advertising tools i.e. ad banners and pop up windows, in term of the awareness raising by the tools. There are two areas of awareness that have to be measured in this study. Firstly, it is the effectiveness of internet advertising for a new brand, while internet advertising is the only channel for its communication. Secondly, it is to measure the awareness being raised by internet advertising for established brand names which also use other advertising media. In other words, to measure the awareness solely raised by internet advertising of an existing brand from consumer side. The objectives can be explained as follows:

1. To examine the effectiveness of internet advertising of a new brand, while internet advertising is the only advertising media the brand employed. Measuring the awareness created by the internet advertising tools so that the relationship between consumer awareness and internet advertising features is evaluated.

2. To examine the effectiveness of internet advertising of an established brand name, while the brand utilize several advertising channels. In term of the awareness created for an existing brand using internet advertising, which equal to the consumer perception towards the advertising of the brand minus awareness created by traditional advertising channel such as TV.

The Banner Arrangement

In order to achieve the purposes, an experiment was designed to stimulate the same environment where respondents access internet. Two web sites, named as "Web Site 1" and "Web Site 2", with same layout and same content were created, in the way that four ad banners and a pop up window for advertising were included in each web sites. The layout of the two web sites is shown as **Appendix A**. However, the two web sites have different ad banners and pop up window, so that different control and comparison could be carried out. Brand names for new product are made up. The ad banners for those new brands are also made by researcher (see **Table 1**). The ads are attached in **Appendix B**.

TABLE 1.

THE BRANDS USED IN THE WEB SITE

Position	Web Site 1	Web Site 2
Top	Banner A = 果之味白檸水 (Make up brand)	Banner F = 維他奶 Vitasoy (Existing brand)
Bottom	Banner B = 黑松綠茶 (Make up brand)	Banner G = 黑松綠茶 (Make up brand)
Side	Banner C = 四季綠茶 (Make up brand)	Banner H = Snapple (Existing Brand)
Side	Banner D = Coca Cola (Existing Brand)	Banner I = Coca Cola (Existing brand)
Pop Up	Banner E = Sunraysia (Existing Brand)	Banner J = 果之味白檸水 (Making up Brand)

Those existing brands were chosen because they have commercials during the period of the experiment conducted. In terms of popularity, Banner D and Banner F are very famous while Banner E and Banner H are less famous.

Hypothesis

There are couples of control and comparison by using ad banners in both the web sites.

Hypothesis and explanations are as follows:

H1: The awareness of banner ad of existing brand will be higher than that of new brand.

It is expected to have difference in advertising for a new brand and an existing brand on internet. This is an interesting question to advertisers. No previous research on internet advertising based on the product nature was found. When choosing the advertising media, advertisers have to think whether it is suitable to their product. The answer can be obtained by comparing the awareness of ad banners with same size and locations, i.e. ad banner A and ad banner F.

H2: For the new brands, the awareness of ad banner in the pop up window will be higher than those attached in web page.

Literature claimed that pop up can increase click-through dramatically²², however, the effect of pop up windows on ad awareness was still unclear. As the pop up increased click-through rate, it is also expected to have higher awareness. The hypothesis can be verified by comparing banner A and pop up window J

H3: The awareness of ad banner on different location of the web page will be

22 Bukovac, Li. "Cognitive impact of banner ad characteristics: An experimental study" Journalism and Mass Communication Quarterly, (Columbia), Summer 1999, p.341

difference.

The charges of banner ad depend on the position of the banner. The cost of banner at the bottom of web site is significantly lower than that at the top. It implies that the banner position could be a factor of the effectiveness of ad banner. So the awareness of a new brand name, which is advertised on internet on different locations, by comparing ad banner A and ad banner B, should be different.

H4: The awareness of ad banner with different size will be different.

In addition to position, the size is another concerns to the media cost. Previous research found that large banner ads resulted in more clicks and shorter reaction times than small banner ads²³. Based on such findings, the awareness of banner different size is expected to be different. The answer can be obtained by looking at the awareness of banner E, banner F and banner H.

23 Bukovac, Li. "Cognitive impact of banner ad characteristics: An experimental study" Journalism and Mass Communication Quarterly, (Columbia), Summer 1999, p.341

Web Site Design

In designing the two web sites, some technical specification has been taken into consideration. The web sites were designed to be compatible for both Internet Explorer[™] and Netscape[™] version 4.0 or above. Print out of the Web Sites were attached in **Appendix C**. The sites provided the best view by resolution of 800 x 600 which is the most common for commercial web design. The long banner (Banner A, B, E, F, G and J) were designed as 470 x 90 pix of animated gif graphic while the small banner (Banner C, D, H and I) were in the form of 120 x 148 pix of JPEG graphic file. All the banner animation were in three pages and rotated in 2 seconds per page so that all animation cycle would be completed in 6 seconds. To ensure the loading time of the web sites, the file size of all banners were compressed to 18kb or below.

When surfer clicks on the banner, he or she will be directed to another homepage in a separate browser window and cgi counters would record the number of click-through. For existing brands, the homepage directed will be the corporate homepage of that brand, while for make up brands, it will be an entertainment homepage providing information on beverage products. The arrangement of separate window guarantee that the surfer would come back to the web site and questionnaire.

After the surfer browsed through the site, they are brought to an online questionnaire (see **Appendix D**) to answer 32 questions about their views on different brand names, perception to internet advertising and traditional advertising. After the pilot test, the link of questionnaire on the web site was delayed for 15 seconds in order to guarantee minimum web surfing time and avoid surfers to jump to the questionnaire before the web site is completely loaded (see 4.4 pilot test section). Those two groups of respondent do have the same questionnaire, so that different control and cross comparison can be carried out.

Brand names to be advertised are chosen from a range of fast moving consumer product (FMCG), and beverage products are selected finally. The reason for choosing FMCG is that an industry in which have many players as possible is most desired in this experiment, because it would gives an impression to respondent that those make up brand names are also one of the players in the industry. In contrast, if choosing an oligopoly industry, then using a make up brand would have an negative effect to respondents since they would found that those make up brands are not a real brand names in the market. Beverage products were chosen because it can generate non-gender nor age biased response from respondents.

The reason for choosing material from dining experience is to align the nature of content of the web sites to the category of advertising product, in the way that enhance the memory retention of the respondent. Similar to the beverage products, article in dinning of chocolate fondue would be natural to surfer as it does not generate gender and age bias to respondents.

To make the web sites have an appearance of commercial portals, two domain names were registered. As the university web server was used in this research, two short domain names were used so that respondent would not notice that it was an academic research before getting into the questionnaire page. The domain names were "http://myweb.n3.net" for web site 1 and "http:// funfunfun.n3.net" for web site 2.

To create a realistic simulation of web-surfing and to measure the awareness created by the internet advertising tools, JavaScript was imposed on the web site to disable the "back" function when the respondent are answering the online questionnaire. In addition, a form validation program was employed in the questionnaire to reject incomplete answers.

Online Questionnaire

The questionnaire consists of 32 questions. The first five questions concern about their recognition of the brand names advertised on the web site, three are established brands and two are make ups. The later 5 questions are about respondent memory retention of TV advertising of those brands, while then the respondent is asked about their memory retention of internet advertising of these brand in another 5 questions. Respondents were required to select their view on a statement by a seven-point scale with, ranging from 1-“no idea” to 7-“very familiar”. This stage intends to collect perception of information search i.e. awareness raising of the brands in consumer behavior of the respondent. As internet users do not prefer typing during web surfing, all the brand recall in the questionnaire were aided recall, and designed as multiple choice questions.

Next three questions are questions about respondent perception on internet advertising. Respondents were required to select their view on a statement by a seven-point scale, ranging from 1-“Very Disagree” to 7-“Very Agree”. This part collects data about perception in the process of respondent consumer behavior. It collected information about perception of consumers towards internet advertising and intends to evaluate the effect of internet advertising on traditional consumer behavior.

Another three questions asking respondent comment on effectiveness of different internet advertising application (News group, chatroom and common web page). Respondents were required to select their view on a statement by a seven-point scale, ranging from 1-“Very ineffective” to 7-“Very effective”. Follow by two questions about format of internet advertising to respondent, this part try to collect data on preference of respondent consumer behavior.

Nine questions are designed to collect respondent personal information and demographic including time and age of internet usage, online time and online shopping experience.

Pilot test

Pilot Run was conducted to versify the experiment and avoid ambiguity in the web sites and questionnaires. A testing group of 10 respondents was invited to fill in the questionnaire. Feedback and comments on the web site and questionnaire were collected. Based on the feedback, some adjustments were made:

- The time spent was extremely short. Some Respondents jumped to questionnaire page immediately without reading the content because the invitation has not mentioned the web site. So, the invitation was redesigned emphasizing the web site

content.

- Respondents were misled by question 1 and 2 concerning web site design. In the pilot test, respondents tried to reload the first page of the web site when they read the questions. The questions were then removed from the questionnaire.

Sampling and invitation

Convenience sampling was used in data collection. Invitation emails were sent to course-mates and friends of researchers. The invitations were also passed out through ICQ and local universities' newsgroups. All invitations were carefully arranged so that one respondent would only receive one version of URL. Follow up emails and ICQ messages were sent again to remind respondent to fill in the questionnaire one week after the first invitation.

Limitations

Due to the objective of this research and to solely evaluate the creating of awareness, there are couples of limitation on the methodology.

- The project only measure the awareness on new brand using internet advertising, but have not examine the effect of reinforcement of effectiveness of a new brand

using internet advertising as an addition to traditional advertising.

- The content of the web site is related to the advertising products in nature. The research has not investigated the effect of internet advertising of non-related nature advertising product.
- The methodology has not cover the effect of different types of ad banner and pop up window on internet advertising.
- The research could not estimate the effect of internet advertising on other internet application e.g. portal for email.
- One may argue that results from the research only apply to FMCG products. Different results and conclusion may come up with different nature of products or services. E.g. luxury products, computer products etc.

CHAPTER V

FINDINGS AND ANALYSIS

Demographics

In the research, a sample size of 170 data is collected. 85 samples are collected in each web site through the online questionnaire. Analysis of demographics is shown in **Table**

2. Overall 57% of the respondents are female, which is a new finding as most literature found that 60% of web surfer are male. These probably because women are more likely willing to answer questionnaire, while men usually ignore it. It may also due to the sampling method, as a portion of the sample were collected from university which has more than a half population of female student, the demographic may be distorted. More than 40% of respondents with income less than HK\$5000 indicates that a significant portion of the respondents are student. Apart from gender, other demographics detail matches with literature information. About 70% of the respondents are aged between 21 to 30. About 50% of the respondents group have internet age from 1 to 3 years. More than 70% of respondents spend more than 4 hours a week on internet. About 50% of respondents spend more than 4 hours a week on TV. The most popular activities on internet in descending order are emailing, web surfing and ICQ. While online shopping is still not very popular, almost 70% of sample have no experience in online shopping,

and less than 4% get use to online shopping as a habit.

TABLE 2
DEMOGRAPHICS OF THE RESPONDENTS

	Category	Percentage
Gender	Male	43%
	Female	57%
Age	Below 15	1.8%
	16-20	20%
	21-25	34.1%
	26-30	34.1%
	31-35	7.6%
	36-40	1.2%
	Above 40	1.2%
Monthly Income	Below \$5000	44.1%
	\$5001 - \$8000	4.1%
	\$8001 - \$11000	9.4%
	\$11001 - \$14000	14.7%
	\$14001 - \$17000	16.5%
	Above \$17001	0%
Internet Age	Below 1 year	11.8%
	1 – 2 years	28.2%
	2 – 3 years	27.6%
	3 – 4 years	9.4%
	4 – 5 years	8.8%
	Above 5 year	14.1%
Weekly Internet usage	Below 1 hour	4.1%
	1 - 2 hours	7.1%
	2 - 4 hours	12.9%
	4 - 8 hours	24.1%
	8 - 16 hours	22.9%
	Above 16 hours	29.4%
Per week TV watching time	Below 1hour	7.1%
	1 - 2 hours	8.8%
	2 - 4 hours	20%
	4 - 8 hours	22.9%
	8 - 16 hours	22.9%
	Above 16 hours	18.2%

TABLE 2 (CON'T)

Most Favors Internet Activity	ICQ	25.9%
	Chatroom	3.5%
	Newsgroup	2.4%
	Web-surfing	31.8%
	Internet Game	1.2%
	Email	32.9%
	Others	2.4%
Experience on Online Shopping	Never	69.4%
	Yes, but not often	27.1%
	Yes, always	3.5%

Perception of internet advertising

Those results are manipulated and descriptive statistics are calculated.

From Q18 to Q20, results show that respondents have an average to negative attitudes toward internet advertising (see **Table 3**). Results of Q18 indicates that consumer perception on effectiveness of internet advertising remain neutral (mean = 3.99). For Q19, perception on the purchasing intention by internet advertising is low (mean = 3.24). Consumer believes that by looking at ad banner and pop up window would not stimulate the buying intention of the product. Also, consumer believe that TV advertising is more attractive then internet advertising, from Q20 (mean = 2.4).

TABLE 3
DISTRIBUTION OF PERCEPTION IN QUESTION 18 TO 20

	Strongly disagree					Strongly Agree		
Choice	1	2	3	4	5	6	7	mean
Q18. Internet advertising is effective	5	16	38	58	30	15	8	3.99
Q19. Internet advertising can induce your intention of purchase	20	36	42	43	19	5	5	3.24
Q20. Compare with TV ads, Internet advertising is more attractive to you	57	42	36	24	4	4	3	2.41

From Q21 to 23, internet users believe that the most effective form of internet advertising in web page, follow by newsgroup and chatroom (see **table 4**). Although ad in web site was ranked top in the perceived effectiveness, however, the score is remain average (mean = 4.12) and perceived as a neutral channel of internet advertising. The other two, newsgroup and chatroom are perceived as negative in effectiveness according to their mean.

TABLE 4
DISTRIBUTION OF PERCEIVED EFFECTIVENESS IN QUESTION 18 TO 20

	Very ineffective						Very effective		
Choice	1	2	3	4	5	6	7	Mean	
Q21 Newsgroup	20	24	33	46	26	17	4	3.59	
Q22 Chatroom	22	24	39	43	25	12	5	3.48	
Q23 Web page	7	17	24	57	37	21	7	4.12	

Consumers regard animated banner as the most important feature of ad banners to

increase its effectiveness, while TV commercials is perceived as most effective channel of advertising which is far beyond the second one, according to question 24 and 25 (See **Table 5** and **Table 6**).

TABLE 5
DISTRIBUTION OF CHOICE IN QUESTION 24

Q24 Which form of banner ad do you think is most effective?	Frequency
Emphases information	13
Emphases numbers or prices	20
In questions form	1
Animated	112
In pop up window	14
No comments	10

TABLE 6
DISTRIBUTION OF CHOICE IN QUESTION 25

Q25 Which advertising medium do you think is most effective?	Frequency
Bus	4
Outdoor Billboard	1
Radio	2
Newspaper and Magazine	21
Internet	2
TV	140

Effectiveness of internet advertising

Banner for Make Up Brands

By looking at the awareness of make up brands (Q16 & Q17), for web site 1 & 2, it can be concluded that raising awareness of a new brand is difficult (See **Table 7** and **Table**

8). P-value of 0.56 in Anova test among the awareness in question 16 and 17 from both web site indicates that the response of awareness is low, no matter where the position is (See **Appendix E**).

TABLE 7
DESCRIPTIVE STATISTICS OF QUESTION 13 TO 17 FROM WEB SITE 1

	Web Site 1				
	Q13	Q14	Q15	Q16	Q17
Mean	1.812	1.965	1.529	1.471	1.682
Standard error	0.184	0.216	0.154	0.149	0.192
Standard deviation	1.694	1.991	1.419	1.377	1.774
sample variance	2.869	3.963	2.014	1.895	3.148
count	85	85	85	85	85

The ad banners of the two new brands are located at the top (果之味白檸水) and the bottom of a web page (黑松綠茶) for Web Site 1. For Web Site 2, the new brands are located at the bottom (黑松綠茶) and as a pop up window (果之味白檸水). However, regarding its position, the response in Q16 & 17 in questionnaire 1 & 2 are also low. (Test 1, Q16, “No Idea” = 83.5% Mean = 1.47 ; Q17, “No idea” = 82.4% Mean = 1.68) (Test 2, Q16, “No Idea” = 82.4% Mean = 1.65 ; Q17, “No Idea” = 89.4% Mean = 1.4) These indicate that for launching a new brand name exclusively through internet advertising is not very effective, provide that the ad banner is the advertising channel.

TABLE 8
DESCRIPTIVE STATISTICS OF QUESTION 13 TO 17 FROM WEB SITE 2

	Web Site 2				
	Q13	Q14	Q15	Q16	Q17
Mean	1.812	1.318	1.271	1.647	1.400
Standard error	0.203	0.111	0.108	0.173	0.140
Standard deviation	1.874	1.026	0.993	1.594	1.293
sample variance	3.512	1.053	0.985	2.541	1.671
count	85	85	85	85	85

Banner for Existing Brands

By looking at the awareness of existing brands (Q13, 14 & 15) in web site 2, when reinforcing the awareness on an existing brand name using internet advertising, the effectiveness is low (see **Table 8**). (Q13, “No Idea” = 81.2% Mean = 1.81 ; Q14, “No Idea” = 87.1% Mean = 1.32 ; Q15, “No Idea” = 90.6% Mean = 1.27). The low awareness imply that to advertise an existing brand, which are already adopted several other advertising channels, the effectiveness reinforcement is low by using internet advertising.

Ads Location and size

However, the location and size of the ad matter does matter. The P-value of Anova below 0.025 indicates that there is sufficient difference between among the awareness from Q13, Q14 and Q15 of Web Site2 (See **Appendix F**). The brand of Q13 is at the top of the web, and the one for Q14 is at the bottom, while it is at the side with a smaller

size in Q15. Result is that the response is lowest in Q15 (Mean = 1.27), and increase gradually from Q14 (Mean = 1.32) to Q13 (Mean = 1.81). These showed that when the ad is small and located on the side, then the awareness raising is low. However if it is located on the top then the awareness is highest, even surpassed the effect of using a pop up window although it is also low overall. This shows that the best location for an ad banner is on the top of the page. However, the effect of using animation beyond the scope of this research so that proper reason may be left for the future study.

Pop up windows

Looking at Q16 & Q17 from web site 2, promoting 2 new brand names by internet advertising. One is using ad banner and the another is using a pop-up window. There is no statistically different on the ad awareness (see **Appendix G**), For Q16 using pop up (Mean = 1.65), the response of getting awareness is indifference from the one of Q17 using ad banner (Mean = 1.4). Using pop up window as a tool of internet advertising was not necessary to be more effective in term of drawing more attention from customer side. It is also proven by comparing web site 1 and web site 2 on Q16, in which the same brand using ad banner and pop up respectively. In web site 1, the brand is advertised as an ad banner on the top, giving results of mean = 1.47, while it gives result of mean = 1.65 in web site 2 using a pop up window.

As shown in **Appendix H**, the p-value of t-test among Q16, the same brand, from web site 1 & 2 has no substantial difference, it means no substantial difference on building brand awareness by pop up windows and banner ad on the top position. There may be 2 reasons:

1. Pop up is expected to have a much more higher awareness, as a new window is popped up to launch the brand so that web surfer should have a browse at least. However, due to the habit of web surfer, they close the pop up window straight away once its pop. Therefore, the expected effect has not been achieved fully.
2. The ad banner in web site 1 is located at the top, which usually draw more attention, as proofed above earlier.
3. The overall awareness is too low to make statistical comparison.

Site traffic

From 22 March 2000 to 7 April 2000, there were 304 and 319 visits for web site 1 and 2 respectively. The average traffic was about 19 visits per day.

Distribution on Time spend

The time spent by each web surfer was recorded by counting the arrival time on the web sites and of the questionnaire page, and the time spent of respondent who filled in the questionnaire is recorded. And due to the server problem, a small portion of surfers' spent time cannot be recorded. Out of the 85 respondents, 69 and 75 time records were obtained from web site 1 and web site 2 respectively.

The average time spent were found to be 5 minutes 35 seconds and 4 minutes for web site 1 and web site 2 respectively (see **Appendix I**). Surfers stayed in content page from the shortest of 20 seconds to longest of 1 hour 35 seconds. As mentioned in the methodology, the link of questionnaire on the web site was delayed for 15 seconds, it is reasonable that the shortest time spent is slightly longer than the delay time. However, the content page is not likely to consume surfers for more than an hour, the extremely long time spent may be due to multi-opening of browser windows by web surfers and not concentrated to the web site of experiment.

TABLE 9
DISTRIBUTION OF TIME SPENT ON THE WEB SITE

Time Spend (min: sec)		Frequency count	
		Web site 1	Web site 2
	00:00	0	0
00:00 -	00:30	2	6
00:30 -	01:00	19	20
01:00 -	01:30	6	15
01:30 -	02:00	12	8
02:00 -	02:30	8	10
02:30 -	03:00	5	3
03:00 -	03:30	2	2
03:30 -	04:00	0	2
04:00 -	04:30	1	1
04:30 -	05:00	2	2
05:00 -	05:30	0	0
05:30 -	06:00	0	0
06:00 -	06:30	0	0
06:30 -	07:00	0	0
07:00 -	07:30	1	0
07:30 -	08:00	1	0
08:00 -	08:30	1	0
08:30 -	09:00	1	0
09:00 -	09:30	0	0
09:30 -	10:00	2	0
Above	10:00	6	6
Total		69	75

Table 9, Appendix I and Appendix J show the distribution pattern of time spent on the two web sites. The distribution patterns are similar as both are rightly skewed. Most surfers (68%) spend from 30 seconds to 2 minutes 30 seconds. The mean time spent on the two web sites were 4 minutes and 5 minutes 35 seconds, the differences may due to the out-liner of extremely long time spent by opening multi-windows. Unlike TV, which can only display single channel at a time, web surfer may open several web browser windows and leave them idle. It is believed that those respondents who spend

more than 10 minutes on the web site opened several windows, switched between them and left the first page idle for quite a long time. This concluded that the results from out-liner are not significant and can be ignored.

Time spent and awareness

Respondents exposed to three banner ads for experiment in web site 1 and four banner ads for experiment in web site 2. The relationship between time spent of surfer and individual banner awareness was plotted on **Appendix K**. Regression and R square of score of awareness of individual banner versus time spent is calculated. All R square values below 0.12 indicate that less than 12% of ad banner awareness can be explained by the linear regression model.

The average ad awareness scores by each respondent were calculated by taking the mean of the awareness to the ad they have been exposed to. The regression of average awareness on the time spent was determined and the summary output was shown in **Appendix L**.

From the regression output, the coefficient of the time spent has P-value of 0.31 for Web Site 1 and 0.04 for Web Site 2. Larger than 0.025 of P-value in both regressions

coefficients indicates that the time spent is not a significant factor to the average ad awareness under 95% confident limit.

Other factor on awareness

Apart from the time spent, other features of the respondent would have a higher average ad awareness were investigated, that is, what kind of people will pay more attention to the ad banners. To evaluate the relationship between respondent demographic and their internet usage, couples of statistical analysis have been carried out.

Internet Age

The factor of Internet Age on the ad awareness was considered. The Internet age refers to number of years that surfer has been using Internet. According to the result, majority of respondent is those who have use internet for 1 to 3 years, which align with the development and popularity of internet in Hong Kong.

The average awareness scores from the two web sites were combined and then grouped by the Internet Age. One way ANOVA test was conducted among those groups and the result was shown in **Appendix M**. The P-value of 0.44 in the ANVOA shows that the

average awareness was not sufficiently difference among the groups under 95% confident limit. That is, Internet Age is not sufficient to be a factor affecting the ad banner awareness.

Weekly Internet Usage

The respondents were then group by their weekly internet usage, which were online more than 8 hours per week and less than 8 hours per week. The reason for using 8 hours as boundary because the two resulting groups would be substantial enough to be examined. A t-test was conducted and the test result was shown in **Appendix N**. The two tails P-value of 0.54 indicates that, under 95% confident limit, the average awareness was not sufficiently difference among the two groups. That is, internet usage, or the weekly online time is not sufficient to be a factor affecting the awareness of a brand using ad banner.

Online shopping experience

Similar to the Internet Usage, the respondents were grouped by their online shopping experience. As the size of respondent of having frequent online shopping is very small which is not significant enough to form a group for t-test or ANOVA test, therefore, two

groups were formed instead. One group is respondents who have experience of online shopping and another group of samples is respondents who have never tried online shopping before.

A t-test was conducted among the two groups and the result was shown in **Appendix O**.

A P-value of 0.49 from the test indicates that, under 95% confident limit, the average awareness was not sufficient difference among the two groups, which means that online shopping experience is not sufficient to be a factor affecting ad banner awareness.

Click through

In the period of the experiment, there were 283 visits for web site 1 and 303 web site 2.

In those 586 visits, 60 surfers clicked on the web banner. As some of those surfers clicked more than one banner, it made up a total of 73 click-through (see **Table 10**).

However, out of the 60 surfers who have clicked the ad banner, only 15 of them filled in the questionnaire, the number of respondents is too small to conduct quantitative the analysis.

TABLE 10

NUMBER OF CLICK-THROUGH AND NUMBER OF SURFER WHO HAS CLICKED

THE BANNER

	Web site 1	Web site 2	Total
Total Clicks	39	34	73
No. of people clicked	31	29	60
Visit (site traffic)	283	303	586

When looking at click through rate of individual banners, click through rates ranged from 1.1% to 7.1% (see **table 11**). As expected, the click through rates were found to be constantly low and matched the value of 0.7% to 3.0% from previous literature review.

In addition, no specific pattern of the click through rates on banner location or brand type was found.

TABLE 11

DETAILS CLICK-THROUGH RATE OF INDIVIDUAL AD BANNER

Ad position	Web site 1		Web site 2	
	Clicks	Click/visit	Clicks	Click/visit
Top	5	1.7%	7	2.3%
Side 1	6	2.1%	5	1.7%
Side 2	5	1.8%	9	3.0%
Bottom	3	1.1%	6	2.0%
Popup	20	7.1%	7	2.3%
Total	39	13.8%	34	11.2%

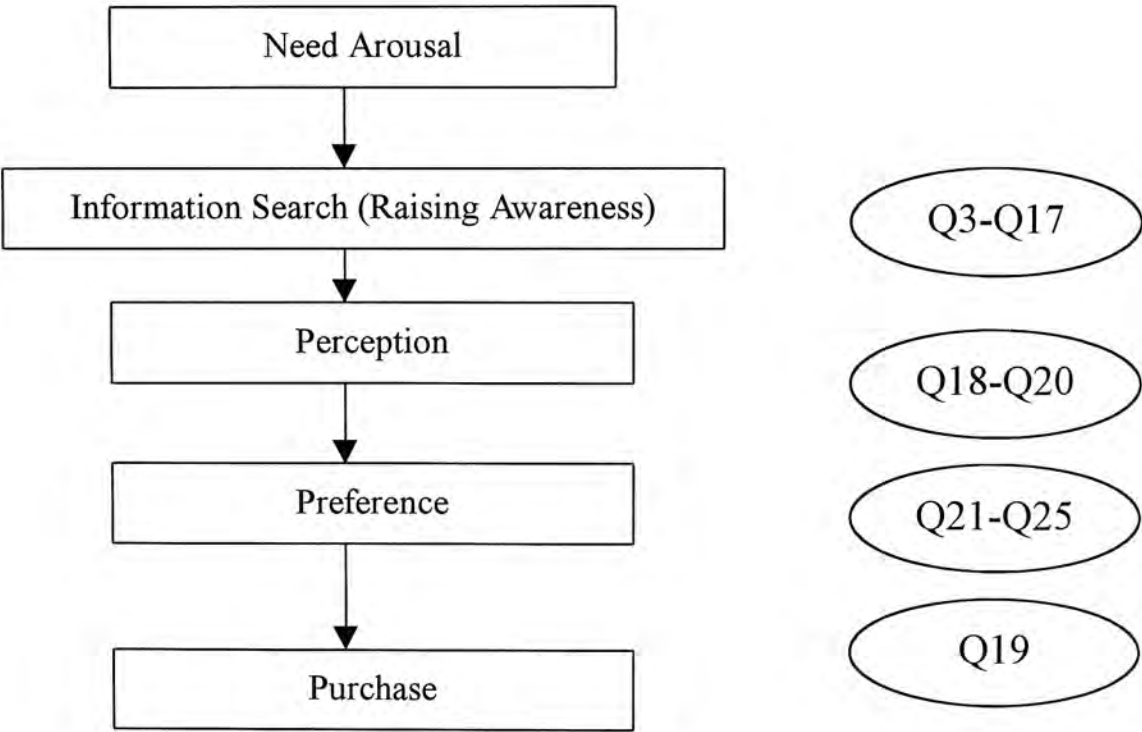
CHAPTER VI

DISCUSSION AND IMPLICATIONS

Consumer behavior process

Investigating the effect of internet advertising on consumer behavior would required an estimation of impact of awareness raising on different stage of consumer behavioral process. In order to achieve this, model of consumer behavior shown in **figure 1** is used.

Figure 1. The model of consumer behavior



The chart on consumer behavior process shows different stages: 1. Need Arousal 2.

Information Search 3. Perception 4. Preference 5. Purchase. The question numbers on the right indicate the relationship between the process to the question in the online questionnaire. Following this model, impact of internet advertising on consumer behavior is evaluated.

Information Search, creating awareness

Internet advertising is treated as a new advertising tools and is perceived as one of the most important weapon in advertising, in terms of its tailored-fit and one-to-one feature. However, the web surfing activities only allow reactive communication rather than pro-active information search, due to the restriction of its nature. Focusing on advertising tools such as ad banner and pop up window on internet, the progressive awareness produced is lag behind than the one expected. The research found that no matter advertise a new brand or an established brand name does not give substantial increase in awareness towards the brand from the consumer. This put a doubt on the effectiveness of internet advertising in term of increasing the brand awareness, and also leads to a question of value of thousand of companies rushing to their ad on the internet. The worthiness of internet advertising seems to be uncertain, especially with the huge amount of charges by mega-portals.

Instead, advertising on internet would give the company a trendy image, in the way that they notice internet is the most fast-paced communication means with its state of art. That would serve as a public relations tool rather than a proper advertising vehicle.

Compared with traditional advertising such as TV, the awareness by internet advertising is much lower. Therefore, spending advertising budget on traditional advertising channel may be a wiser choice at the moment. However, it may also depend on the nature of products and services to be advertised.

Perception

Research has shown that consumer perception on effectiveness of internet advertising remains low. It was found that most consumer regards internet advertising is ineffective, and it could not simulate buying intention of the advertising product and service. On the other hand, they still prefer TV advertising to internet advertising. As TV remains one of the most compulsory equipment in family nowadays, the coverage and communication provided by TV is hard to catch up in the coming few years. Also, TV provides communication of a wider range of demographic including age, income, occupation and social class. These results imply that consumer still pay more attention on TV advertising, rather than internet ad banners. Advertiser have to spend their

advertising budget more wiser when they are considering internet advertising, as heavy investment may be needed to alter this perception from consumer. And there is no guarantee how long would it takes.

However, the unique feature of internet gives it some credits, in term of the timeliness and geographic. It reaches different people at different places, at anytime, which TV can never achieved.

Preference

It was found that consumer demand a more attractive ad banner and pop up window for internet advertising, in term of its design and animation. It is reasonable, while ad banner can only achieve a blink of eye to web surfer, attractive internet advertising design is required to draw consumer attention. Animation is one of the answers, to provide visual effect that give web surfer a sustainable memory of the product or services. Therefore, further development of ad banner design would be beneficial to the internet advertising industry, and in fact, the change is rapid in internet advertising design. Animation is eye-catching. Moderate usage often attracts positive attention to the banner. The come out of Flash™ gives advertising agents and web designers more flexible environment to create their design, with innovative animation and movie-like

feature. It also applies to pop up windows, so that a more creative idea could be fulfilled by technical advancement. However, it still need more time for Flash TM animation to become common advertising technique because not all internet browser can read Flash image, and extra plug-in is required to download before use.

According to web surfers' perception, horizontal and vertical portals would be the best place for internet advertising using ad banners and pop up windows. It provides information for advertisers to choose the best application on internet to promote their brands. Rather than newsgroup and chatroom, in which allows web surfer to chat and express their opinions on a specific topic, advertising in portals would gives a similar effect as advertising on TV. Since the way of web surfer seeking information in the portal is similar to TV watchers watching TV program, both of them are receiving products information at the same time at their information receiving process.

Charging method

One of the criteria in choosing a web site to advertise on is the average time spent of surfer on that web. For example, the average time spent on AltaVista in October 1999

was 6 minute 5 seconds²⁴. This data is frequency disclosed and used as an element on pricing the ad banner charge.

The Researcher believed that the time spent of surfer on a certain web page related to the quality of the content. As the content used in the experiment was extracted from a commercial web site, the time spent distribution will be closed to the real situation.

In both experiment and the real situation, the measurement of time spent is done by electronic footprint of the surfer (the IP address, system's version, browsers' version and etc), and this technique is commonly used by commercial web site. As mentioned in the section 5.6, the time spent on web site can be easily distorted by outlier. A small portion of extremely long time spent can significantly increase the average value, surfers may actually leave the browser window idle and not exposed to the banner ads. Commercial portals could face the same measurement error from those out-liners and the accuracy on this measure is seriously doubted.

Surprisingly, it was found that the awareness of banner ad is not related to the time spent on the web. In other words, surfers stay longer in certain web page does not mean

24 "Net results." Advertising Age (8 November 1999): 114

that they are more likely to "see" the banner ad. The phenomenon may probably explained as follows.

Unlike TV or radio commercials, which has a separate air time for advertisement, Internet banner ad is placed together with other content or information on the web page. Even the banner ad is exposed, surfer is not likely to pay attention to the banner ad because they are concentrating on the core content of the page at the same time. A longer time spent means a longer time reading the content, but probably not the ads.

Combining these two implications, the time spent cannot be accurately measured and it has no directly relationship on the effectiveness of the ads, the charging method of internet advertisement by the average time spent is challenged.

Who read the ads ?

Internet advertising is still new to advertisers. Although the demographics of Internet users are dream of advertisers, they do not have enough knowledge on the nature of people who really "read" the ad. When looking at the sample group who are aware on the banner ads, no direct relationships to the awareness from their demographics can be found.

It is perceived to behave different of awareness among surfer with different internet age and internet usage. For the surfer to have higher internet usage and longer internet age, they have been exposed to more internet advertisement than the other group and become accustomed to the ads. Hence, they were expected to have lower awareness toward ad banners. In contrast, people have online shopping experience were supposed to be more alert to the product or brand shown on the internet. Hence, they were expecting to have higher awareness towards ad banners.

However, it was found that people with different internet age, internet usage and online shopping experience are not sufficient to account for different awareness on ad banners. As an advertising media, Internet is not mature enough to provide solid information on demographic pattern of the ad viewers.

Click through

The click through rate varied from 1.1% to 7.1%. The pop up window on existing brand is found to have higher click through rate than other banners, but the overall rate is regarded as low. The pop up window is claimed to have higher click through rate and it is usually charged higher than other banners attached in the web page, but this fact is

found to be valid only for brand reinforcement (existing brand). So, when a new brand is about to advertise by Internet ad banner, it is not recommended to spend extra money to put it in the pop up banner.

CHAPTER VII

CONCLUSION

Using internet advertising as one of the weapon in advertising campaign is the most debatable topic in recent years. Advertisers are very eager to know about consumer perception on internet advertising using aids like ad banners and pop up windows. Moreover, the effectiveness of internet advertising is always difficult to measure since using, which leave the worthiness of spending advertising budget on ad banners remain in doubt.

Consumer perception takes into account for the effect of internet advertising. They prefer traditional advertising such as TV, magazines and newspaper to the information superhighway. Also, they find no stimulation of purchasing on internet, comparing with advertising in other communication channels.

In order to evaluate its effective, awareness of advertising brand was being measured. It was found that the brand recognition from consumer is low, no matter advertising a new brand or an established brand. And this judgement put a cold water on the internet advertising hot, implying that internet advertising is not effective as advertiser imagine.

Although the unique feature of internet does give some advantage in advertising, however, the effectiveness remains low at this stage. Also, the awareness varies with the appearance and its size and location. The brand consciousness is higher when the ad banner is larger, and the best place in the site for internet advertising is located at the top of the site. It gives some guideline of advertising fee for internet advertising agency to charge their clients, so that according to its effectiveness, larger ad banner should cost more and the ad banner on the top of a portal should also charge the highest fee among other ad banner in different locations.

Pop up window was claimed to be one of the most innovative internet advertising tools. The separate browser window pops up to promote the advertising product, which gives web surfer an isolated window to receive product information exclusively. Although the awareness of raising from using pop up window is also low, it is already higher than the one of ad banner. Therefore, the charging fee of pop window should be higher, for its return of higher effectiveness achieved. In fact, this is what internet advertising agency and commercial portal adopting now, which was proven reasonable in this research. The design of ad banner and pop up window takes into account for the attractiveness of the internet advertising, and advertisers should consider the banner layout and utilize latest internet software in order to guarantee a success in advertising

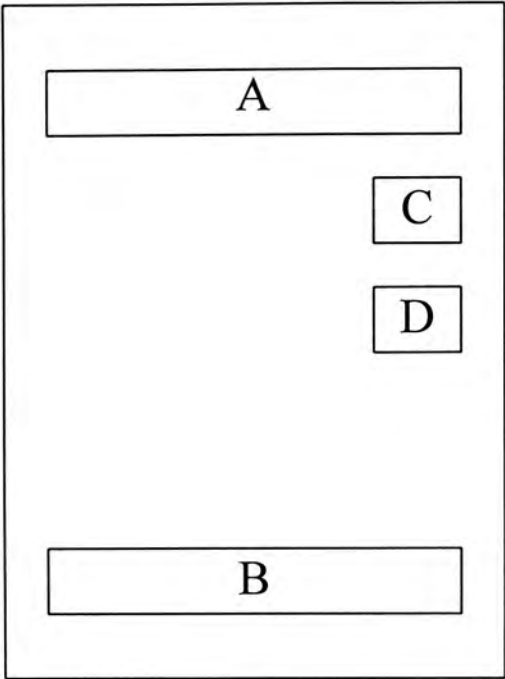
campaign.

The click through rate was found to be low and has no traceable pattern. It is not appropriate to charge on such uncertain click through rate. Furthermore, no characteristics of web surfer can be found to identify their attitude towards ad banner. The knowledge of internet advertising is not sufficient to provide an overall picture.

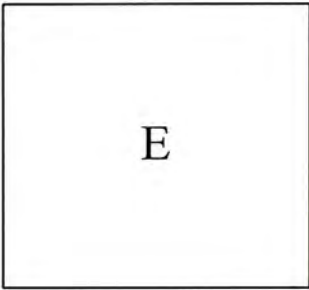
This put a question mark on the effectiveness of internet advertising in term of increasing the brand awareness, and also leads to a discussion on the value of thousand of companies rushing to their ad on the internet. The worthiness of internet advertising seems to be uncertain, especially with the huge amount of charges by popular portals. In other words, advertisers have no idea on the effectiveness, even the click through. Internet, as a new advertising channel, still has far to go in order to have clear picture on its audiences, to catch up with other traditional media, and to bring wealth to advertisers. Further Study need to be carried out on how to enhance the cost-effectiveness and the value of promoting products on internet.

Appendix A – Web Sites Design Layout

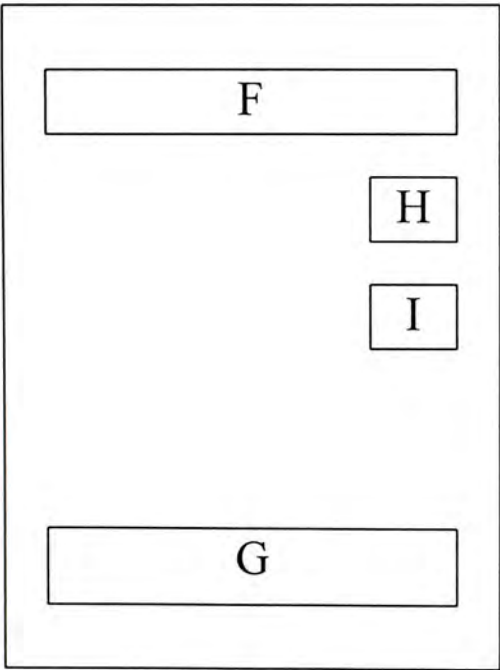
Web site 1



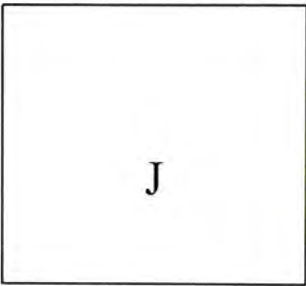
Pop up window



Web Site 2



Pop Up Window

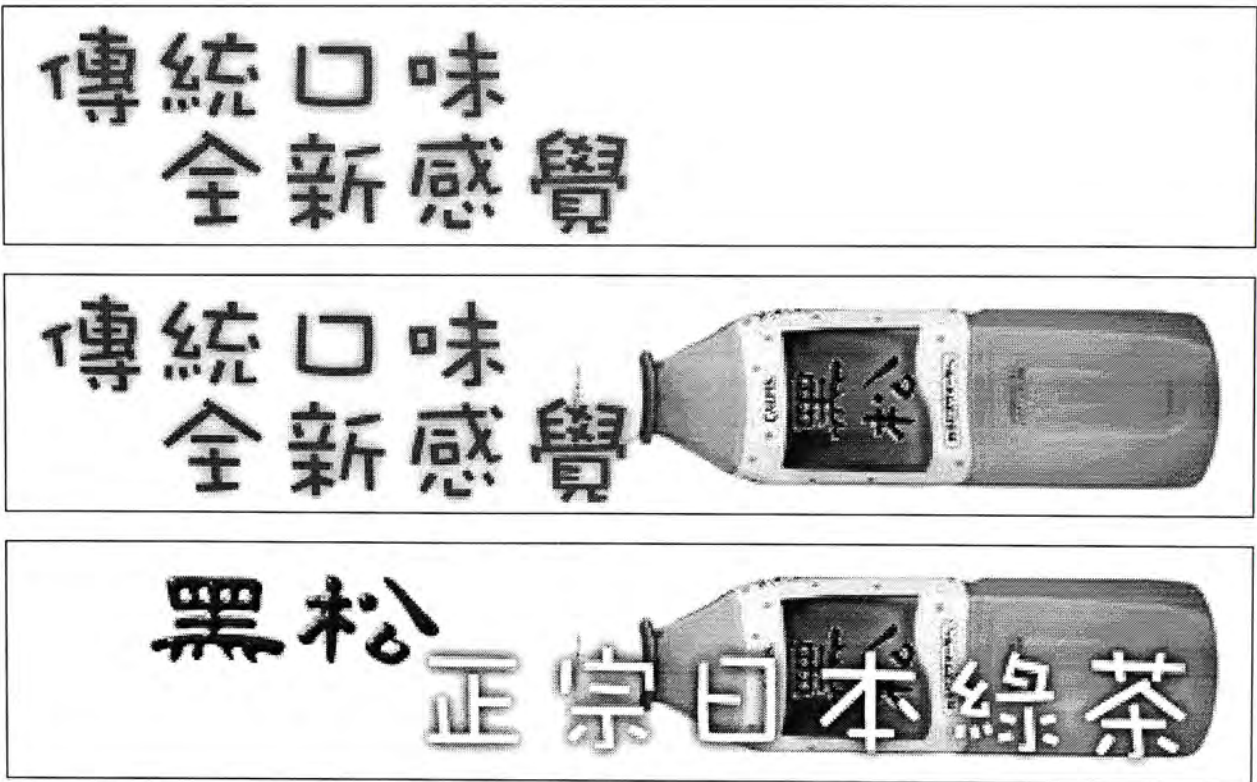


Appendix B The ad banners

Banner A & J



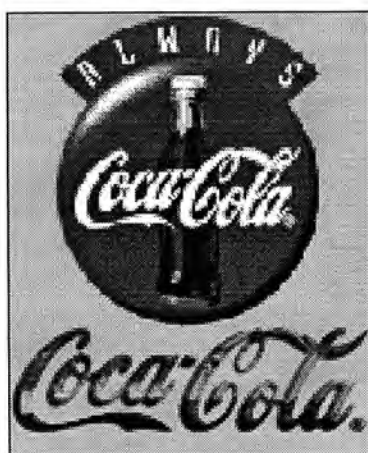
Banner B & G



Banner C



Banner D and I



Banner E

SUNRAYSLA 咁好味



SUNRAYSLA 咁好味

唔好比小朋友知呀




SUNRAYSLA



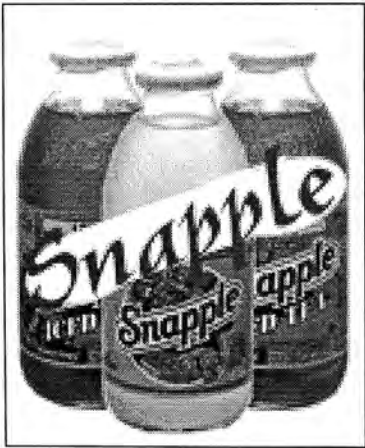
Banner F

喜歡你是你

喜歡你是你

維他奶
Vitasoy

Banner H



Appendix C Print Out of The Web Sites

Web Site 1

美食好介紹



今天是



現時香港天氣



至現時為止，
總瀏覽人數為

0431

飲食網站

飲食旅遊街
飲食資訊中心
食通街
Food-Style
搵食易
食街

建議使用Netscape 4.0或以上，
及800x600解像度



同糕推報款一間呢至，吃香
你雪做日一前呢話貨盒以，
，近「果」出節闖亦入幾可點
菜最佢《蘋推人直生尾百料係
名但「就情地楊月三配又
士，同店在我闊12千鍋鍋
瑞過都力並。老由一火火
是食店2月古，盒，鍋了？力
鍋未門朱鍋多壇火賣引古？
火過專據某火百總力經吸朱呢
力聽力，力二賣古已咁宗食
古能古盡道古掉外朱月乜正得
朱可朱到報朱賣力裝個有？有
都、谷紙賣已古杯兩竟乜有
我店廣報外日朱隻今究D港

用法國貨

一隻古時候，叮，翻
實純的朱，而凝，
其要食2分，全熱1
鍋，法國，得完熱
火自法，熱食才「
力來體「熱時」
古克固溫住小時就
朱300是高煲三小鐘
賣有之爐唔約隔半
外約熱波黎鍋每次
個內加微出火以每
呢杯未入拾的可間
酒，放後「以時
大力就之熱所熱



一個用生命的火鍋



平日出街食朱古力火鍋通常都係
u一鑊過「，不過呢個外賣火鍋可以一
次食唔晒放內雪櫃雪凍，基本都水「開變物」就
。後三個月，係內熱生朱，限等力的「會食物」就
接不放入你力一個月喇！

老闆醒你食法小貼士

1. 食物於入鍋中取起後待1分鐘先食，D朱古力脆

- 如等外 如
 例蘿，有
 果菠感 時
 生、口 口！
 以果有。入滋
 係異最癮，力
 都奇梨過料百
 常、啤好配力
 通蕉多冷做古
 鍋香士內卷朱
 。火、中熱蛋的
 味力梨其外用裝
 好古啤，酸試大
 仲朱多主內以加
 地食士為甜可食
- 2.
- 3.



To display Chinese Characters in an
 English OS, please download Njwin



傳統口味
 全新感覺

Web Site 2

美食好介紹

喜慶你是你



至現時為止，
總瀏覽人數為
0447

飲食網站

飲食旅遊街
飲食資訊中心
食通街
Food-Style
搵食易
食街

建議使用Netscape 4.0或以上，
及800x600解像度



同糕推報款一間呢至，吃香
你雪做報一前呢話貨盒以，
，近」果日一前呢話貨盒以，
菜最佢《蘋果》推出節闖亦入幾可點
名但「就情地楊月三配又
士，同店在我闊12千鍋鍋
瑞過都力並。老由一火火
是食店月古，盒，鍋了？力
鍋未門2朱鍋多壇火賣引古？
火過專據某火百總力經吸朱呢
力聽力，力二賣古已咁宗食
古能古盡道古掉外朱月乜正得
朱可朱到報朱賣力裝個有？有
都、谷紙賣已古杯兩竟乜有
我店廣報外日朱隻今究D港

法國貨

一隻古時候「叮，翻
實純的時，而凝1次，
其的要「得完熱
鍋，法國，熱食才」
火來自體「熱時「夠
力來固溫住小時就
古300克是高煲三小鐘
朱有之爐唔約隔半
賣外約熱波黎鍋每次
個內加微出火以每
呢杯未入拾的可間
酒，放後」以時
大力就之熱所熱




一個月壽命的火鍋

u 平 日 出 街 食 朱 古 力 火 鍋 通 常 都 係 一
一 鑊 過 「 晒 個 如 朱 短 入 內 你 力 一 雪 櫃 翻 用 ， 月 凍 無 果 古 ！ 基 次 含 的 本 都 水 「 會 食 命 封 質 直 就
次 」。 接 可 能 縮 短 至 一 個 月 喇 ！ 力 火 鍋 通 常 都 係 一



老闆醒你食法小貼士

- 食先1分鐘待後
- 起地 常士奇主最酸。配食百
取脆 通如、爲梨內癮做如力
中脆 鍋例蕉等啤甜過卷有古
鍋力 火果香蘿多外好蛋時朱
入古。力生、菠士，冷用口的
於朱味古以梨、中感內試入裝！
物D好朱係啤果其口熱以，大滋
食，仲食都多異，有外可料加力
- 



To display Chinese Characters in an English OS, please download Njwin



傳統口味
全新感覺

Appendix D The Questionnaire

我們是一組商科學生，現正進行一項學術研究，希望 各下抽空五分鐘完成以下問卷。所有只作學術用途。回答以下問題時，請以第一份感覺、細心作答，並回答所有問題，多謝合作

你認識以下品牌嗎?

- Q3. 維他奶Vitasoy
- Q4. Sunraysia
- Q5. Snapple
- Q6. 果之味白檸水
- Q7. 黑松綠茶

無印象

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

你在過去七日有否見過以下商品的電視廣告?

無印象

- Q8. 維他奶Vitasoy
- Q9. Sunraysia
- Q10. Snapple
- Q11. 果之味白檸水
- Q12. 黑松綠茶

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

你在過去七日有否見過以下商品的網上廣告?

無印象

- Q13. 維他奶Vitasoy
- Q14. Sunraysia
- Q15. Snapple
- Q16. 果之味白檸水
- Q17. 黑松綠茶

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

你同不同意以下論點

十分不同意

- Q18. 網上廣告是有功效的
- Q19. 網上廣告能令你有購物的衝動
- Q20. 網上廣告比電視廣告更能吸引你

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

你認為網上廣告在以下地方是否有效

無效

Q21. Newsgroup

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

Q22. Chatroom

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

Q23. 一般網頁

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐

Q24. 你認為哪一種形式的網上廣告最有效：

Q25. 你認為哪一種媒介的廣告最有效：

個人資料

Q26. 性別：

Q27. 年齡：

Q28. 居住地區：

Q29. 每月收入： HK\$

Q30. 接觸Internet年資：

Q31. 平均每星期上網時間：

Q32. 平均每星期睇電視時間：

Q33. 上網使用最多時間的活動：

Q34. 你有否網上購物的經驗：

Appendix E Output Summary of Anova Test on Ad Awareness of Make Up Brand

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Test1_Q16	85	125	1.470588	1.894958
Test1_Q17	85	143	1.682353	3.147899
Test2_Q16	85	140	1.647059	2.540616
Test2_Q17	85	119	1.4	1.671429

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	4.738235	3	1.579412	0.682627	0.563181	2.631488
Within Groups	777.4118	336	2.313725			
Total	782.15	339				

Appendix F Output Summary of Anova Test on Ad Awareness of Existing Brand on Web Site 2

Web Site 2

Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
Q13	85	154	1.811764706	3.511764706
Q14	85	112	1.317647059	1.052661064
Q15	85	108	1.270588235	0.985434174

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	15.27843137	2	7.639215686	4.129409983	0.017194147	3.031630058
Within Groups	466.1882353	252	1.849953315			
Total	481.4666667	254				

Appendix G T-test on the Ad Awareness of New brand on Pop up windows verse Bottom of the Web Site 2

Test_two

t-test: Two-Sample Assuming Equal Variances

	Q16	Q17
Mean	1.647059	1.4
Variance	2.540616	1.671429
Observations	85	85
Pooled Variance	2.106022	
Hypothesized Mean Difference	0	
Df	168	
t Stat	1.109848	
P(T<=t) one-tail	0.134325	
t Critical one-tail	1.653975	
P(T<=t) two-tail	0.268651	
t Critical two-tail	1.974186	

Appendix H T-test on the Ad Awareness of Q16 of Web Site 1 and 2 - Located on Top verse Pop up window

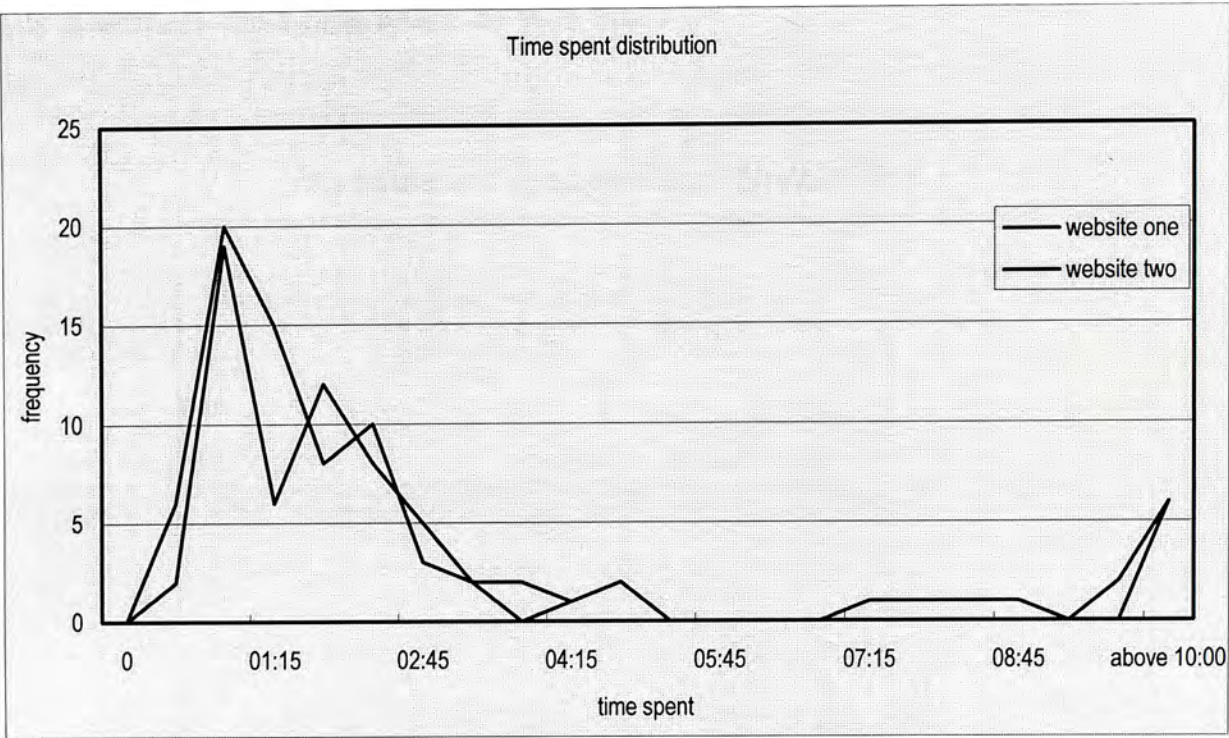
t-test: Two-Sample Assuming
Equal Variances

	Web Site1 Q16	Web Site 2 Q16
Mean	1.470588235	1.647058824
Variance	1.894957983	2.540616246
Observations	85	85
Pooled Variance	2.217787115	
Hypothesized Mean Difference	0	
Df	168	
t Stat	-0.77251491	
P(T<=t) one-tail	0.220447476	
t Critical one-tail	1.653975232	
P(T<=t) two-tail	0.440894953	
t Critical two-tail	1.974185579	

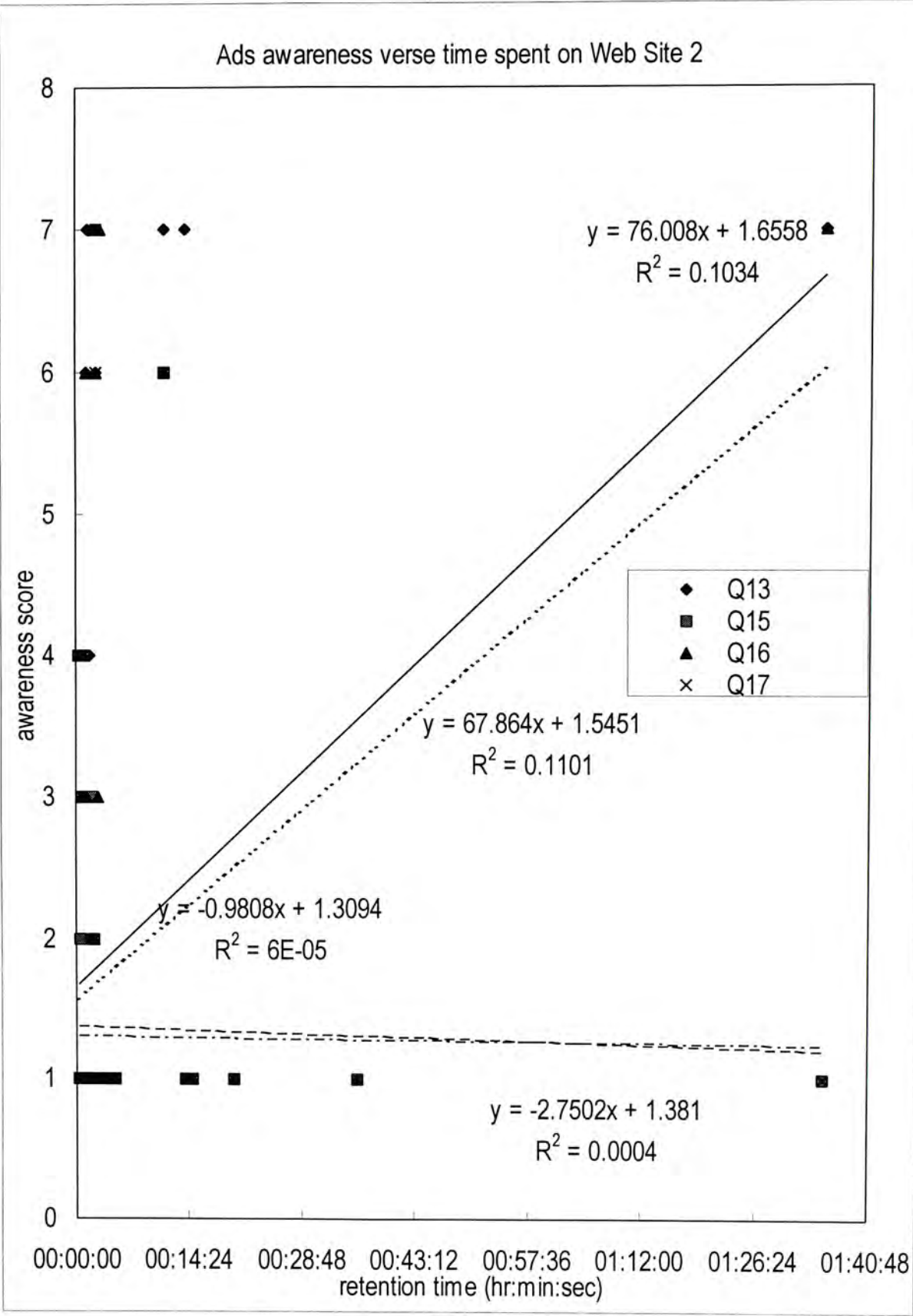
Appendix I Descriptive statistics of time spent web sites

Time spent (hr: min: sec)		
	Web site one	Web site two
Mean	0:05:35	0:04:00
Standard error	0:01:30	0:01:22
Median	0:01:52	0:01:24
Mode	0:00:56	0:00:31
Standard deviation	0:12:28	0:11:49
Sample variance	0:00:06	0:00:06
Range	1:06:35	1:34:50
Minimum	0:00:26	0:00:20
Maximum	1:07:01	1:35:10
Sum	6:25:17	4:59:36
Count	69	75

Appendix J Distribution chart of Time spent on web site



Ads awareness verse time spend on Web Site 2



Appendix L Output summary for the regression of average awareness verse time spent

SUMMARY OUTPUT

Regression of average awareness verse time spent on web site 1

Regression Statistics	
Multiple R	0.12352493
R Square	0.015258408
Adjusted R Square	0.000560773
Standard Error	1.528692385
Observations	69

ANOVA					
	Df	SS	MS	F	Significance F
Regression	1	2.426062344	2.426062344	1.038153931	0.311916374
Residual	67	156.5723273	2.336900408		
Total	68	158.9983897			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.857523679	0.201887262	9.20079684	1.67445E-13	1.454554907	2.260492451	1.454554907	2.260492451
time spent	-21.811358	21.40680385	-1.01889839	0.311916374	-64.5395291	20.91681311	-64.5395291	20.91681311

SUMMARY OUTPUT

Regression of average awareness verse time spent on web site 2

Regression Statistics	
Multiple R	0.234900539
R Square	0.055178263
Adjusted R Square	0.0422355
Standard Error	1.198305011
Observations	75

ANOVA					
	Df	SS	MS	F	Significance F
Regression	1	6.121752422	6.121752422	4.263252066	0.042497988
Residual	73	104.8232476	1.435934898		
Total	74	110.945			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	1.472808987	0.146155739	10.07698365	1.83635E-15	1.181520823	1.764097151	1.181520823	1.764097151
time spent	35.03547861	16.96826934	2.064764409	0.042497988	1.217743663	68.85321356	1.217743663	68.85321356

Appendix M Output Summary of ANOVA test on Awareness among different Internet Age

Average awareness by Internet age
Anova: Single Factor

SUMMARY

Groups	Count	Sum	Average	Variance
below 1 yr	20	30.75	1.5375	0.5398209
1-2 yrs	48	90.583333	1.8871528	3.3798728
2-3 yrs	47	70.916667	1.5088652	0.8044185
3-4 yrs	16	23.333333	1.4583333	1.0055556
4-5 yrs	15	28.5	1.9	2.7928571
above 5yrs	24	31.166667	1.2986111	0.7632347

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8.215433	5	1.6430866	0.9698206	0.4379567	2.2692674
Within Groups	277.8516	164	1.6942171			
Total	286.06703	169				

Appendix N t-test of average ad awareness among people who online above and below 8 hrs per week

Average awareness of online time above and below 8 hrs
t-test: Two-Sample Assuming Equal Variances

	Below 8 hrs	above 8hrs
Mean	1.6841564	1.5599251
Variance	2.1704368	1.2702002
Observations	81	89
Pooled Variance	1.6988843	
Hypothesized Mean Difference	0	
Df	168	
t Stat	0.620672	
P(T<=t) one-tail	0.2678283	
t Critical one-tail	1.6539752	
P(T<=t) two-tail	0.5356566	
t Critical two-tail	1.9741856	

Appendix O t-test on the average awareness of people have and have not tried online shopping

t-test: Two-Sample Assuming Equal Variances

	No	Yes
Mean	1.5727401	1.724359
Variance	1.5433935	2.0521619
Observations	118	52
Pooled Variance	1.697841	
Hypothesized Mean Difference	0	
Df	168	
t Stat	-0.699074	
P(T<=t) one-tail	0.2427364	
t Critical one-tail	1.6539752	
P(T<=t) two-tail	0.4854727	
t Critical two-tail	1.9741856	

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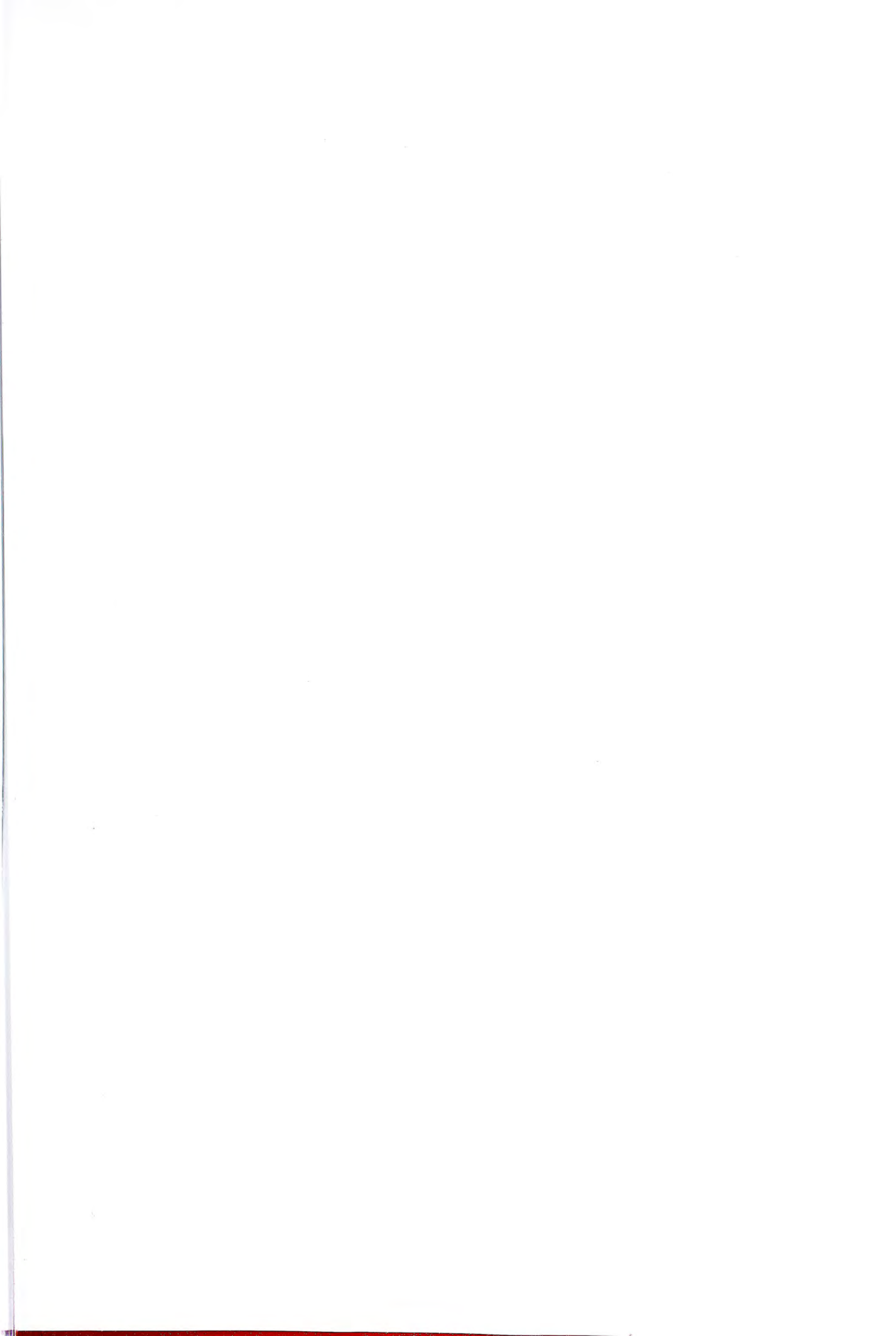
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